

REMARKS

In response to the Official action dated June 3, 2009, applicant requests a two-month extension of time thereby extending the due date until November 3, 2009. The appropriate extension fee of \$245 has been provided.

The objection to the Specification in paragraphs [0020] and [0024] have been addressed and corrections made.

Reconsideration of the refusal to allow the claims as currently presented is respectfully requested.

A new clarified independent claim 50 has been provided in place of claim 27 to address the objections under 35 USC § 112. Further, the dependent claims now depend from claim 50.

The essential features of the claimed inventive method are:

that the at least one metallization is applied to the at least one surface side of the ceramic layer,

further the at least one metallization is then structured to form the plurality of metal areas which are at a distance from each other,

that the thermal treatment process including the shock-cooling for producing the separating or break of lines is performed after the metallization forming the plurality of metal areas had been applied to the at least one surface side of the ceramic layer, and
that the thermal treatment including the shock-cooling is performed progressively in between all the metal areas (new claim 50).

In a further preferred embodiment of the invention, the ceramic layer has a thickness in between 0.1 to 3 mm, the metal areas have a thickness between 0.02 to 0.6 mm and the metal areas are at a distance of 0.1 to 3 mm from each other (new claim 51).(see paragraphs [0060] and [0061] of the specification)

It is an essential feature of the claimed invention that the separating or break-off lines are produced such that breaking of the large scale substrate along the breaking lines to form smaller single metal-ceramic substrates results in the smaller single substrates have straight lined edges.

The inventor had discovered, that this is obtained in a safe manner and arbitrary weakening of the ceramic material by the thermal treatment is avoided, if at a specific thickness

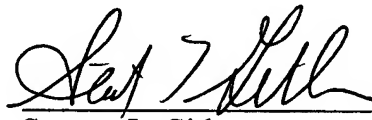
of the ceramic layer in the arrange between 0.1 and 3 mm and at a specific thickness of the metal areas in the arrange between 0.02 and 0.6 mm, the metal areas are only at a distance of only 0.1 – 3 mm from each other, so that the metal areas can provide for some cooling of the ceramic layer during thermal treatment process or step and therefore this thermal treatment is actually concentrated on the middle of the space in between the metal areas and arbitrary weakening of the ceramic material outside the intended separating or break-off lines is avoided.

US 5,609,284 (Kondratenko) cited by the Examiner refers to a method of cutting non-metallic materials, specifically glass. This cited art does not refer either to a method for manufacturing a metal ceramic substrate or to method for manufacturing such substrates with the specific combination of features of the new claims 50 or 51.

US 6,207,221 (Schulz-Harder), applicants prior issued patent, merely teaches metal-ceramic substrates with a plurality of metal areas on at least one surface side of a large scale ceramic layer and separating or break-off lines in between the metal areas. However this cited art does not teach the specific features of the new claims 50 or 51.

The unique process is nowhere disclosed or suggested by the art of record. If any questions remain, the Examiner is encouraged to contact the undersigned attorney for a telephonic or personal interview.

Respectfully submitted,



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